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Rutkowski

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(54) **FORMULATIONS AND METHODS FOR RECOVERY FROM DENTAL SURGERY**(75) Inventor: **James Louis Rutkowski**, Clarion, PA (US)(73) Assignee: **CLARION RESEARCH GROUP**, Clarion, PA (US)

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(51) **Int. Cl.**

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(52) **U.S. Cl.**

CPC	A61K 31/573 (2013.01); A61K 31/4045 (2013.01); A61K 35/16 (2013.01); A61K 38/1841 (2013.01); A61K 38/1875 (2013.01); A61K 38/30 (2013.01); A61K 45/06 (2013.01); A61L 27/24 (2013.01); A61L 27/54 (2013.01); A61L 2300/222 (2013.01); A61L 2300/43 (2013.01); A61L 2300/45 (2013.01); A61L 2300/602 (2013.01)
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(58) **Field of Classification Search**

None

See application file for complete search history.

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Primary Examiner — David Romeo**(74) Attorney, Agent, or Firm — Hogan Lovells US LLP****ABSTRACT**

Methods and formulations for the improvement of recovery following bone-impacting injury or surgery. The formulations disclosed herein preferably include a blood component with a pharmaceutical agent. The blood component is preferably whole blood or platelet-rich plasma. The pharmaceutical agent may be a glucocorticoid hormone or other organic pharmaceutical agent. Particularly preferred pharmaceutical agents include dexamethasone, triamcinolone hexacetonide, melatonin, purmorphamine, 17 β -estradiol, vitamin K₂ (menaquinone-4, MK4,), bisphosphonates, derivatives thereof, and combinations thereof. The formulations may be directly administered to a surgical or injury site where improved bone growth is desired. The formulations may also be applied to or otherwise incorporated into scaffolding structural components commonly employed in the medical field to promote bone structure and growth. The pharmaceutical agent may be employed in an immediate release form or a sustained release form.